More transparency – greater efficiency

Whether it's MES (Manufacturing Execution System), maintenance management or energy management: the more differentiated the data that is determined, the more precise are the decisions that can be made based on this data. This is exemplified by the expanded use of ProLeiT's Plant iT software in the Glockenbrot Bakery in Frankfurt.

++ Glockenbrot Bakery, Frankfurt production unit

The Glockenbrot Bakery, which belongs to the REWE Group, supplies 1350 REWE markets and 900 Penny branches. In the Frankfurt area alone, 144 Market Baker branches (checkout area shops in REWE markets) are supplied with in-house products. Glockenbrot runs ten baking lines in the Frankfurt production unit, the biggest of the REWE Group's three in-house production facilities.

A decision was taken in 2008 to modernize the control of the raw materials supply system. The aim of this was to integrate the production processes that were involved and to bring their technical performance up to current standards, and to achieve it all while operations were ongoing – which was unavoidable in view of the high capacity utilization throughout the baked goods production unit.

Version 8 of the Plant iT process control system was already fully set up in the following year. Since then, the latter's comprehensive modularity, flexibility and wide variety of parameterizing options have guaranteed end-to-end control of the raw materials processes, in addition to which they ensure complete linking into the ERP system. Today the software supplied by ProLeiT AG in Herzogenaurach manages more than 250 different recipes containing a total of over 200 raw materials.

Soon after implementing the control system, and impressed by the efficiency increases and cost savings around the topics of energy and sustainability that were made possible by the greater data transparency, the company decided to

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expand the existing link-up opportunity. In a first step, this involved extending the functionalities of the existing control system and installing additional links, e.g. to the maintenance area.

Another connection related to the Manufacturing Execution System (MES) that was implemented during the extension measures. According to Thomas Schatz, Project Manager at ProLeiT, "The MES supports the whole production line from manufacture to the final packed product. The information it supplies, mainly about the ratio of the amount of raw material used to the number of pieces ultimately produced, allows a large number of performance statistics: e.g. how well the dough ran, how efficiently the products were packed, and where periods of malfunctioning may have occurred within the production process."

The highly differentiated data and statistics determined in relation to this are converted into corresponding web-based reports that prepare for further decisions on central topics, e.g. increasing the line's efficiency or optimizing energy consumptions. The extent and differentiation of the data recording enable precise, very concrete calculations, e.g. determination of the values for energy usage per unit mass of dough. Christian Drescher, Maintenance Manager at the Glockenbrot Bakery, gives a practical example of the importance of high data transparency in practical operations.

"One of the first data analyses showed us that one crate washing plant was consuming significantly more water than the other. This kind of concrete information puts us in a position to initiate appropriate action without delay. This means we can save resources quickly and make a positive contribution to the environment."

According to Drescher, the same is true for the recording of data from the servicing and maintenance area. Here again the response times can be reduced and the necessary decisions taken with pin-point accuracy. "If we follow the data over a prolonged period of time, it enables us to take preventive action, thus helping us to optimize the entire servicing and maintenance area." +++

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